

TUMORS OF THE KIDNEY—WITH REPORTED CASES.*

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IN PRESENTING for your consideration a paper on renal tumors, it is not my purpose to bore you with a mere rearrangement of text-book facts, nor to weary you with an exhaustive monograph on this broad and interesting branch of surgery. I purpose rather to give a brief review of symptomatology and diagnostic measures, followed by a short discussion emphasizing such points as have been forcibly impressed upon me by experience with kidney tumors in general, and two cases in particular.

And let me say that my remarks are from the viewpoint of the general surgeon rather than the specialist, for I have neither the temerity nor the presumption to address as a specialist the genito-urinary section, worthily represented as it is on the Pacific Coast by men whose names are synonyms for professional and scientific excellence.

The kidney substance may be attacked by any form of solid or cystic growth. But our interest centers about those tumors which constitute by far the greatest number of these cases, viz., cancer; lipoma, fibroma, etc., are rarely seen. Our consideration, then, will be confined to cancer and cysts. Cancer of the kidney, using the term comprehensively as including all malignant growths, may be one of four forms, carcinoma, hypernephroma or Grawitz tumor, adenoma and sarcoma. With their pathology we are not concerned. Nor have we time to enter into the minutæ of their symptoms. Clinically they are associated with three typical signs, hematuria, pain and tumor. Of these three, hematuria is of the greatest significance clinically and surgically, for this is the one symptom which should lead to the discovery of the malignant growth at a time when operation is most indicated. The hematuria is total, which, with its microscopic appearance and absence of bladder symptoms, stamps it as of renal origin. The bleeding is spontaneous. Its onset may occur while the patient lies quietly in bed. It is not accompanied by pain, as a rule, though fibrin masses may set up a colic in their passage of the ureter. It is intermittent, beginning quietly, lasting a few days, and suddenly ceasing. There are usually repeated attacks separated by intervals of varying length. Bleeding occurs in 70 to 80 per cent of all cases, and is the first symptom noticed in about one-half. When blood is found, it is of inestimable value, in that it leads to investigation, with the consequent discovery of the second cardinal symptom, tumor.

Tumor is present in nearly all cases, though it may not be discovered because of the absence of subjective symptoms indicating disease. It is the first symptom noticed in 20 per cent of the patients. When the tumor is small or is on the upper pole of the kidney it cannot be felt. To detect a growth in its early stages requires the most delicate touch and repeated examinations, as well as a familiarity with the various methods of renal palpation. Ordinary bimanual lumbar examination suffices in tumors of some size or on the lower pole. When the organ is generally enlarged by an internal growth the method of ballottement of Guyon is said to be the most efficient. Israel's bimanual examination, in the modified later Sims position, especially if conducted under immersion in a hot bath, gives the greatest relaxation of the abdominal walls, and is the most generally useful of the various methods.

Taken in conjunction with bleeding, the source of the tumor is plain. When occurring alone, it may be confused with other tumors of this region. It is recognized by its mobility with respiration and its lumbar contact. There is an area of tympanites between the tumor and liver, and in a minority of cases

a second area of resonance corresponding to the cross colon.

Pain is only an occasional symptom. When present it is of two possible forms, viz., a colicky pain caused by the passage of clots through the ureter, or an indefinite dull pain in the side.

The urinary examination in tumor cases is usually negative. There is occasionally albumin, but the majority of patients present no changes further than the occasional bleeding.

Pressure symptoms occur in the later stages. The most interesting of these conditions is the symptomatic varicocele. This subject has been much discussed, but is of clinical significance only when it develops rapidly, and is bilateral. Various theories have been advanced in explanation of the phenomenon, but that of Legueu seems to correspond best with the facts. He considers the varicocele as an indication not so much of the tumor itself as of a glandular extension, the mass of enlarged glands at the hilum obstructing the return circulation. It is, therefore, in his opinion, only of value as a sign of inoperability.

The above symptomatology is well recognized by every intelligent practitioner. In the matter of diagnosis, however, the same is unfortunately not true. This is due in part to inability to interpret the symptoms, and partly to lack of experience in the methods of eliciting the physical signs, while with some men there is noticed a lack of appreciation of responsibility and a negligence in following the symptoms elicited to their ultimate significance. For example: How many general practitioners are sufficiently skilled in renal palpation to detect a tumor in its distinctly operable stage? Consider for a moment the remarkable ability of Israel, who has given an accurate ante-operative description of the form and situation of a tumor the size of a cherry. We are overwhelmed with chagrin at the vast chasm which separates such erudition from the ignorance and carelessness of the man who fails to discover a tumor until it has grown to the size of a child's head, and has long since passed the stage of operability. To be sure, this contrast is unwarranted, for not every surgeon can be an Israel; yet it serves to drive home the fact of the inexcusability of a failure to use all known clinical methods to discover the origin of every case of hematuria, no matter how transient or seemingly trivial.

And right here lies another pitfall into which the careless surgeon falls. Hematuria, from the frequency of its occurrence, the manifold possibilities of its origin, the usually trivial significance, is not given its due consideration. Moreover, it is in the very apparent insignificance, in its painlessness, in its spontaneity and short duration that the danger lies. For it is these cases that are the most treacherous, and that frequently prove to be the first signs of malignant renal disease. How true it is that in renal sarcoma of children the first attack of hematuria has been seen by the family physician and dismissed with orders to remain in bed and adhere to a milk diet. Under these directions the bleeding ceases, and the physician is relieved to have cured the trouble so easily. The malignant tumor, at that time operable, goes on, steadily, painlessly, without further hemorrhages, until it passes the possibility of surgical help.

We hear on all sides the plea of the surgeon for early diagnosis in gastric carcinoma. Physicians are thoroughly alive to the necessity for radical measures in every suspicious condition of the breast. And yet we constantly see cases of obscure and repeated hematuria which have never had the benefit of a cystoscopy, an examination under anesthesia, or even the very simple and useful expedient of palpation during immersion in a hot bath.

Cystoscopy is not a difficult procedure. To be

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come expert requires experience with a large number of cases; but to master the technic, to become familiar with the general findings, even to examine and catheterize the ureters, is within the reach of any practitioner who is willing to devote a little time and study to the subject. No conscientious physician having in his care a patient with suspected brain tumor would neglect to make early and repeated ophthalmoscopic examination of the eye ground. And yet what could be more striking than the analogy afforded between this method of examination and the procedure of cystoscopy in suspected renal tumors, which procedure is as easy, and fully as reliable, as an examination of the eye ground. There is scarcely a gentleman in the profession who would not resort to immediate gastric analysis in suspected carcinoma of the stomach; and yet the clinical significance of the findings is not to be compared with the information obtained by seeing through the cystoscope clear urine escape from one ureter while its fellow jets a bloody stream.

While it is reasonably simple in a majority of cases to diagnose a kidney tumor, it is not easy to say what form of growth we have to deal with. In children it is reasonable to say, on the doctrine of probabilities, that the renal mass is a sarcoma. In adults about 30 per cent of all kidney growths are sarcoma, about 20 per cent are carcinoma, 15 per cent are hypernephroma, while the rest are adenoma or benign growths. Before 40 sarcoma is most probable. After this age the chances favor carcinoma, or Grawitz tumors. If distant metastasis is present, especially if of venous origin, the Grawitz tumor is probable, particularly if hematuria has been a prominent symptom. The diagnosis between carcinoma and Grawitz tumors cannot be absolutely made. And right here let me pause to insist on the frequency of these Grawitz tumors, which has been so forcibly brought before the professional mind in California in a late paper by Dr. Moffit, and accentuated by cases cited by Dr. Jellinek. The same fact is also borne out by the statistics of Albarran and of Hoche, who say that 15 per cent of renal tumors are of this variety.

Apocryphal of tumors of the kidney substance, I wish to briefly report a case. I observed this patient while house surgeon at St. Luke's Hospital, New York, on the service of Charles L. Gibson, through whose courtesy I am enabled to report it.

Mr. B., a man of 50, apparently in good general condition except for a moderate anemia, was operated on for hemorrhoids and fistula. On the second day his temperature was 104.8°, and he was slightly delirious. He cried out at intervals, though suffering no pain. A fever averaging 101° continued, though the wound ran the usual course. He became unusually weak, and his anemia rapidly increased. A week after operation the hemoglobin was 45 per cent. The urine, at first negative, showed a heavy albumin test. The chief interest centered in the blood count. Repeated examinations showed a marked leukocytosis, an excess of small lymphocytes, a progressive anemia and reduced red cells. The last blood count taken gave a hemoglobin of 25 per cent, r. b. c. 790,000, leukocytes 16,000, of which 60 per cent were small lymphocytes. Three weeks after operation a tumor was first palpable in the left hypochondriac region. It rapidly increased in size. At no time was it painful or tender, and never in its course were urinary symptoms present other than the albuminuria. Death occurred at the end of five weeks, and the autopsy showed a large, irregular, soft, whitish sarcoma of the kidney, with general sarcomatosis of the retro-peritoneal glands.

This case illustrates the group of malignant tumors of the kidney, and yet presents many peculiar features. Only one of the cardinal symptoms was present, viz., tumor. Moreover, the blood condition was such as to indicate that the renal sarcoma was not a primary tumor, but rather a general lympho-sarcomatosis, in which the kidney was the seat of the largest sarcoma growth. In its blood changes the case shows a distinct analogy to certain forms of acute lymphatic leukemia, and it is not at all certain in my mind how the case should be classed.

Primary tumors of the renal pelvis are extremely rare. Growths originating in the kidney proper may,

by extension or ulceration, involve the calices; but a tumor arising primarily from the pelvis is of decidedly infrequent occurrence. Albarran, writing in 1898, gathers together only 35 instances, of which three were his own patients. Of this number, 10 were carcinoma, 16 papilloma, and but four were sarcoma. The pelvis alone may be attacked, though it is frequent for the tumor to spread by extension or implantation until part or all of the ureter is involved.

The clinical polymorphism of these growths and their close resemblance to kidney tumors renders diagnosis difficult, as shown by the fact that only Israel and Albarran have made absolute preoperative diagnoses. In the character of the hematuria, the absence of pain, the normal character of the urine, the presence of tumor, etc., they so clearly resemble renal growths as to make the diagnosis of the latter very natural, particularly in view of the rarity of the pelvic growths. Certain conditions, however, and especially the association of certain symptoms, should lead to absolute diagnosis. Thus if the tumor can be made out to be a hydronephrosis or a hemato-nephrosis, one should strongly suspect a growth of this variety. Certain clinical pictures should lead to investigation along this line. Thus, if the hemato-nephrosis is established without other symptoms, if the signs of renal tumor are associated with hemato-nephrosis, as in the case I shall shortly report, if, in renal retention, the cystoscope discovers papillomatous tufts extending from the ureter, then the condition in question can be diagnosed almost with certainty. Nephrectomy is the surgical remedy, for while the mortality in these cases is very high, conservative methods are equally fatal because of malignant cachexia and progressive anemia from bleeding into the sac.

The following interesting case was under my care in the wards of the San Francisco Polyclinic, service of Dr. Bazet:

H. C., male, 66, widower, born in Ireland, laborer, no preceding history in any way relevant to the present trouble. About a year before admission he suffered with dyspepsia and eructation of gas. Soon thereafter he noticed an increased frequency of urination, which frequency was rather spasmodic than constant. While at times only rising from bed once or twice during the night, at others he would urinate several times, and fill a chamber before morning. About nine months before applying for relief he first noticed the increased size of his abdomen. This steadily progressed until admission to the hospital. After the appearance of the tumor he passed, on several occasions, urine of a dark or almost black color. He then began to lose flesh and strength. At no time did he suffer from pain.

Physical examination, December 1, 1903. Man of medium frame, poorly nourished. General appearance of a man thin by nature. Was not cachectic, but resembled the meager facies of a patient with a large ovarian cyst. Skin greasy and pale. Lungs negative. Heart showed a distinct hemic murmur. Pulse, 80; slight tension; regular in rhythm and force. Some arterio-sclerosis. The abdomen was immensely distended, resembling a pregnancy at term. Wall thin and tense, umbilicus protuberant. Palpation showed a large mass filling the whole abdomen, extending upward beneath the left costal border and into the left flank, passing downward below the pelvic brim and well over beyond the median line of the body. The mass was tense, apparently thin walled and transmitted a fluid wave with great delicacy. It was everywhere perfectly smooth, except for a mass just above the symphysis feeling like a loop of adherent bowel. Percussion showed dullness throughout the above limits extending without interruption to the middorsal line. Across the summit of the cyst the colon could be plainly felt as a firm fleshy band which, on inflation by rectum, gave a tympanitic note. The extremities were thin and flabby. There were glands in both axillæ and one in the right groin. The scrotum was pendulous and the seat of a moderate double varicocele. Urine was pale yellow, sp. gr. 1.020; no albumin; no blood; no casts. A specimen passed after prolonged manipulation of the tumor showed a heavy sediment of red and white blood cells which were degenerated and disintegrated.

Blood examination showed hemoglobin 55 per cent. Red blood cells, 4,300,000; white cells, 13,000, of which 83 per cent were polymorphonuclear. A quantitative record of the urine showed no variation from the normal. Repeated blood counts showed a progressive increase in the anemia and fall in red cells.

Cystoscopy with the Albarran instrument, and urinary

segregation with the Cathelin segregator both were tried, and failed, the former from persistent bleeding from varicose veins in the bladder, and the latter from the pressure of the immense cyst, which so distorted the bladder as to make segregation impracticable. The cyst was tapped in the lumbar region, and a dark-colored fluid drawn off which showed traces of urea, albumin in large quantities, and a heavy sediment of red and white blood cells, which in their state of disintegration were identical with those found in the urine.

To recapitulate: We had a history of a cystic tumor of nine months' duration entirely filling up the lumbo-vertebral fossa, apparently of retro-peritoneal origin, accompanied by periodic attacks of polyuria and hematuria, causing a moderate cachexia and decided and progressive anemia, and aspiration of which showed fluid contents containing urea and blood products. This was the clinical picture of a hemato-hydronephrosis. The obstruction could be from one of two conditions. One of greater experience in renal surgery might have made the diagnosis from the facts. I could do no better than make a tentative diagnosis by a process of elimination. The patient came to operation then with the possibilities lying between a papilloma of the renal pelvis obstructing the ureter, and a cancer of the kidney proper pressing upon the ureter. In either case operation was indicated, though the chances of successful removal were small. An incision of 15 cm. was made 2 cm. above the ilium in such a direction as to be easily enlarged posteriorly into the angle formed by the erector spinae and the twelfth rib, or anteriorly toward the median line. The cyst was then punctured with a trocar, and fourteen pints of dark, syrupy, bloody fluid removed. The cyst being collapsed, palpation showed the absence of an extensive tumor or large glandular enlargement. I therefore determined to remove the sac. The wound was enlarged for the usual oblique lumbar nephrectomy. The cyst wall was found adherent throughout its whole surface, and separation was consequently tedious, and progressed inch by inch. The outer layer of mesocolon, then the colon itself, and finally the inner vascular mesocolic layer were in turn separated. The pedicle was finally reached and ligated, the ureter being tied, cut and cauterized. Throughout the operation no kidney tissue could be recognized as such. The peritoneal cavity was opened once, but the rent was easily remedied. But little hemorrhage was encountered, and was easily controlled. A Mikulicz tampon was placed in the cavity, and the two ends of the wound closed to the packing. The patient returned to the ward in fairly good condition. For two days he did unexpectedly well, passed sufficient quantity of urine, and maintained a favorable pulse and temperature. On the third day, however, he developed a hypostatic pneumonia, which was obstinate to treatment, and resulted in the death of the patient on the fifth day. The pneumonia was of a purely mechanical type, due to the feeble circulation in a patient nearly 70 years old, of low vitality, and with markedly hydremic blood, but superinduced, of course, by the severity of the operation.

At autopsy the operation site was in excellent condition, with no hemorrhage or sepsis, and a firm pedicle. The cyst proved to be a dilated pelvis, due to obstruction by a tumor. The growth was a pure papilloma the size of a tomato, its base arising near the orifice of the ureter, obstructing the outflow of urinary secretion by the extension of a papillomatous process into the lumen of the duct.

I hope this hurried and brief review of symptomatology and diagnosis of renal tumors, with a report of two specific cases, will serve to emphasize certain points which I have endeavored especially to insist upon. To summarize:

1. It is fully as essential to recognize and diagnose renal tumors in their early stages as in cancer of the stomach and breast.
2. Every surgeon should, by constant practice, endeavor to become so skilled in abdominal examination and so familiar with the various methods of renal palpation as to be able to detect small kidney growths at a time when operation promises greatest chances of cure.
3. Cystoscopy should become more generally familiar to practitioners at large.
4. Hematuria as a symptom should never be looked upon as a trivial circumstance. The more transient, the more spontaneous, the more painless is a hematuria, in short the less its association with other symptoms, and the more trivial and negligible it appears, just in that proportion is it more apt to be the first indication of malignant renal tumor.
5. Obscure hematuria, when found to be referable to the kidneys, should be followed to its ultimate significance even to the extreme resort of exploratory nephrotomy.

THE SURGICAL TREATMENT OF CHRONIC TONSILLITIS.*

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FOR MANY years this subject would cover but a small space on paper, as it was considered that the surgeon had done all that was required of him when, by means of a tonsillotome, he had removed what showed of an hypertrophied tonsil, and probably with it a good portion of the anterior or posterior pillars, creating so much of an after-disturbance in the throat that no singer or public speaker would submit to removal of the tonsils for fear of a total or partial loss of the speaking or singing voice.

Examine the stumps of long-since-removed tonsils and note the scar tissue in adjacent mucous membranes, with what is left of the old tonsil still adherent to other structures of the throat, to be pulled and hauled hither and thither by every muscular action in tone production, and you will readily understand why I have chosen to take up this subject for discussion, especially before an association of this character, where so many general surgeons and practitioners are gathered. No man present but deems, or at some time in his career has deemed, it a simple thing to remove hypertrophied tonsils, and with a great deal of satisfaction to himself and to his clientele; but we who follow up this work and see the after effects and lack of effects can but hope that the day has come, or will come, when this will be left to hands that deal more thoroughly with cause and effect, with work and results.

Chronic tonsillitis can be put under a number of headings; but to get at its treatment I choose to note two varieties, lacunar and true hypertrophic. The first, giving the greatest variety of disturbances and taxing the patience of both patient and surgeon to relieve. In this condition the tonsil may or may not be enlarged. Chronic lacunar or follicular tonsillitis is characterized by the formation of plugs of secretion in the crypt of chronically inflamed tonsils. These plugs are soft, cheesy masses usually about the size of rice kernels. They are white or yellowish-white in color, and have a particularly offensive odor. They consist of material discharged from the tonsil crypt, and are made up of leucocytes, epithelium, chalk, mucus and the various mouth bacteria. The only chronic condition to be confounded is, as you know, mycosis of the tonsil, in which the plugs are more dense, and project beyond the surface of the tonsil. These spurs are removed with greater difficulty, and on examination microscopically are found to consist of leptothrix or some other form of mycotic growth of rapid development. With this form of chronic tonsillitis (lacunar), instead of hypertrophies of the tonsil, there may be a considerable degree of atrophy; in fact, without pulling the pillars forward, it is frequently impossible to discover the crypt when making the pharyngeal examination. These crypts have very little tonsillar tissue about them, and often in tonsils of much larger size the offending crypt is not found until the pillar is drawn forward. The number of crypts that are inflamed or obstructed varies greatly; in large, ragged tonsils the gland is often filled with numerous plugs; small tonsils may have but one or two obstructed crypts. The large tonsils with numerous crypts do not often produce so unpleasant or so marked symptoms as those with less secretion, especially if the crypts which are giving trouble are so located that the secretion is not easily expressed from its bed by the ordinary movements of the throat muscles. The larger tonsils, unless during acute inflammation, give merely a feeling of fullness of the throat, while the closed crypts of the atrophied or small tonsils cause pain in the throat, extending to the ear or to the chest, pain externally in the cervical

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